

Drinking Water Contamination Health Risks

Any technical information found on these pages is primarily intended for environmental health and water supply professionals. Others should be aware of the value of consulting professionals for selection and interpretation of the types of testing which will best address individual concerns.

MCLG = Maximum Contamination Limit Goal

MCL = Maximum Contamination Limit approved by the EPA

Coliform and Surface Water Treatment

Contaminant	MCLG	MCL	Potential Health Problems
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Legionella	zero	TT	Legionnaire's disease
Total Coliform	zero	5%	Indicates gastroenteric
Turbidity	n/a	TT	Interferes with disinfection
Viruses	zero	TT	Gastroenteric disease

For systems analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For systems analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.

Chemistry - Fluoride rule

Contaminant	MCLG	MCL	Potential Health Problems
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Fluoride	4.0	4.0	Skeletal and dental fluorosis
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Chemistry - Phase I Volatile Organics

Contaminant	MCLG	MCL	Potential Health Problems
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Benzene	zero	0.005	Cancer
Carbon	zero	0.005	Cancer
p-Dichlorobenzene	0.075	0.075	Cancer
1,2-Dichloroethane	zero	0.005	Cancer
1,1-Dichloroethylene	0.007	0.00	Cancer, liver, and kidney effects
Trichloroethylene	zero	0.005	Cancer
1,1,1-Trichloroethane	0.2	0.2	Liver, nervous system
Vinyl Chloride	zero	0.002	Cancer

Chemistry - Phase 11 Rule Inorganics

Contaminant	MCLG	MCL	Potential Health Problems
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Asbestos (>1 Opm)	7	MFL	7
MFL	7	MFL	Cancer
Barium	2	2	Circulatory system effects
Cadmium	0.005	0.005	Kidney effects
Chromium (total)	0.1	0.1	Liver, kidney, circulatory
Mercury	0.002	0.002	Kidney, nervous system
Nitrate	10	10	
Methemoglobinemia	1	1	Methemoglobinemia
Nitrite	1	1	Methemoglobinemia
Selenium	0.05	0.05	Liver damage

Chemistry - Phase 11 Rule Organics

Contaminant	MCLG	MCL	Potential Health Problems
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Acrylamide zero TT Cancer, nervous system Alachlor zero 0.002 Cancer Aldicarb delayed delayed Nervous system effects
 Aldicarb sulfone delayed delayed Nervous system effects Aidicarb sulfoxide delayed dela Nervous system effects Atrazine
 remanded remanded Mammary gland tumors Carbofuran 0.04 0.04 Nervous, reproductive system Chlordane zero 0.002
 Cancer Chlorobenzene 0.1 0.1 Nervous system and liver 2,4-D 0.07 0.07 Liver and kidney damage o-Dichlorobenzene 0.6 0.6
 Liver, kidney, blood cell damage cis-1,2-Dichloroethylene 0.07 0.1 Liver, kidney, nervous, circulatory trans-1,2-
 Dichloroethylene 0.1 Liver, kidney, nervous, circulatory Dibromochloropropane zero 0 Cancer 1,2-Dichloropropane zero 0.00
 Liver, kidney effects; cancer Epichlorohydrin zero TT Cancer Ethylbenzene 0.7 0.7 Liver, kidney, nervous Ethylene dibromide
 zero 0.000 Cancer Heptachlor zero 0.0004 Cancer Heptachlor epoxide zero 0. Cancer Lindane 0.0002 0.0002 Liver, kidney,
 nervous immune system, circulatory Methoxychlor 0.04 0.04 Growth, liver, kidney, and nervous Pentachlorophenol zero 0.001
 Cancer; liver and kidney PCBs zero 0.0005 Cancer Styrene 0.1 0.1 Liver, nervous system damage Tetrachloroethylene zero 0.0
 Cancer Toluene 1 1 Liver, kidney, nervous, circulatory Toxaphene zero 0.003 Cancer - canceled in 1982 2,4,5-TP 0.05 0.05
 Liver and kidney damage - canceled in 1983 Xyenes (total) 10 10 Liver, kidney, nervous system

Chemistry - Lead and Copper Rule

Contaminant	MCLG	MCL	Potential Health Problems
Lead zero TTt Kidney, nervous system			
Copper 1.3 TTf			Gastrointestinal irritation

Chemistry - Phase V Inorganics

Contaminant	MCLG	MCL	Potential Health Problems
Antimony 0.006 0.006 Cancer			
Beryllium 0.004 0.004 Bone, lung damage			
Cyanide 0.2 0.2 Thyroid, nervous system			
Nickel remanded remanded Heart, liver damage			
Thallium 0.0005 0.002 Kidney, liver, brain, intestinal			

Chemistry - Phase V Organics

Contaminant	MCLG	MCL	Potential Health Problems
Adipate(di(2-ethylhexyl) 0.4 0.4 Decreased body weight			
Dalapon 0.2 0.2 Liver, kidney effects			
Dichloromethane zero 0.005			
Cancer Dinoseb 0.007 0.007 Thyroid, reproductive organ damage			
Diquat 0.02 0.02 Liver, kidney, eye			
Dioxin zero 0.00000003			
Cancer Endothall 0.1 0.1 Liver, kidney, gastrointestinal			
Endrin 0.002 0.002 Liver, kidney, heart damage			
Glyphosate 0.7 0.7			
Liver, kidney damage			
Hexachlorobenzene zero 0.001			
Cancer Hexachlorocyclopentadiene 0.05 0.05 Kidney, stomach damage			
Oxamyl (Vydate) 0.2 0.2 Kidney damage			
PAHs [benzo(a)pyrene] zero 0.0002			
Cancer Phthalate, [di(2-ethylhexyl)] zero 0.006			
Cancer Picloram 0.5 0.5 Kidney, liver damage			
Simazine 0.004 0.004 Cancer			
1,2,4-Trichlorobenzene 0.07 0.07 Liver, kidney			
damage 1,1,2-Trichloroethane 0.003 0.005 Kidney, liver nervous			

Interim (I) and Proposed (P) Standards for Radionuclides

Contaminant	MCLG	MCL	Potential Health Problems
Beta/photon zero(1) 4 mrem/yr(1) Cancer emitters zero(P) 4 mrem/yr(P) Cancer Alpha emitters zero(1) 15 pCi/L(1) Cancer zero(P) 15 pCi/L(P) Radium 226 + 228 (1) zero(1) 5 pCi/L Bone cancer Radium 226 (P) zero 20 pCi/L Bone cancer Radium			

228 (P) zero 20 pCi/ Bone cancer Radon (P) zero 300 pCi/L Cancer Uranium (P) zero 0.02 Cancer **Contaminant MCLG**
MCL Potential Health Problems Bromate (P) zero 0.01 Cancer Bromodichloromethane(P) zero see TTHMs Cancer, liver,
 kidney, reproductive Bromoform(P) zero see TTHMs Cancer, nervous, liver, kidney Chloral hydrate (P) 0 TT Liver
 Chloroform (P) zero see TTHMs Cancer, liver, kidney, reproductive Dibromochloromethane (P) 0.06 see TTHMs Nervous,
 liver, kidney, reproductive Dichloroacetic acid (P) zero see HAA5 Cancer, reproductive, developmental Haloacetic Acids (P)
 0.06 Cancer Trichloroacetic Acid (P) 0.3 see HAA5 Liver, kidney, spleen, developmental Total Trihalomethanes zero 0.10 (1)
 Cancer

Other Interim (1) and Proposed (P) Standards

Contaminant	MCLG	MCL	Potential Health Problems
Sulfate (P) 500 500 Diarrhea Arsenic (1) 0.05			Skin, nervous system

Proposed National Primary Drinking Water Disinfectant Standards

Disinfectant	MRDLG (MGIL)	MRDL* (MGIL)
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Chlorine+ 4 (as C12) 4 (asCl2) Chloramines++ 4 (as C12) 4 (as C12) Chlorine Dioxide 0.3 (as C102) 0.8 (as C102) ***MRDL may be exceeded on a short-term basis to address water quality problems. Compliance is based on an annual average of monthly averages.**